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Plant competition as an ecosystem-based management tool for suppressing Parthenium hysterophorus in rangelands

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Plant competition as an ecosystem-based management tool for suppressing *Parthenium hysterophorus* in rangelands

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Abstract

The exotic invasive plant pathenium hystephorus is invading rangelands in Africa while causing negative effects on the biodiversity, environment, economy, and human and animal health because eco-friendly control methods are lacking.

We conducted experiments to investigate the suppressive effects of forage legume plant species; desmodium introtrum(Fabaceae),lablab purpureus (Fabaceae), and medicago sativa (Fabaceae) in suppressing the growth of pathenium hystephorus

pathenium hystephorus growth was suppressed when grown with fodder plant species at high density. However, the effect was mediated by the presence of lablab purpureus.

Our work highlights the importance of competitive native plant diversity and density in rangeland management.

Moreover, this control method could be part of an integrated control toolkit being deployed in a community-based approach in other countries.

Keywords

Competition experiment; Invasion; Rangeland management; Suppressive plants;
Tanzania.